Water Supply Planning in Northern Florida

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ABSTRACT

Florida is blessed with abundant rainfall averaging between 47 and 53 inches annually, the prolific Floridan Aquifer, and more first magnitude springs than any other place on earth. It is against backdrop that the 1971 Florida Legislature established Florida's utopian water policy: to "provide sufficient water for all existing and future reasonable-beneficial uses … while providing sufficient water for natural systems." In 1972, the Florida Legislature established five water management districts that are charged with implementing Florida's water policy—largely through the issuance of permits for groundwater extraction.

Groundwater levels of the Upper Floridan Aquifer have declined significantly during the past 75 years. Almost all of the Saint Johns River Water Management District and approximately 35% of the Suwannee River Water Management District meet the definition of "Water Resource Caution Area"—n area where existing sources of water are not adequate to satisfy future water demands and sustain water resources within the 20-year planning horizon.

The Districts have finally recognized that the Floridan Aquifer is at or is very near the sustainable limit of production and that future demand must be met through alternative water sources if we are to avoid unacceptable harm to wetlands, lakes, and springs.

This presentation will look at examples of high-profile water bodies in distress (Silver Springs Group, Lake Geneva and Lake Brooklyn). We will then look at the efforts of the Districts individually—and cooperatively through the North Florida Regional Water Supply Partnership—to develop a regional water supply plan that will provide for all demands over the 20-year planning horizon. Aspects covered include developing protective minimum flows and levels (MFL), developing MFL Prevention and Recovery Strategies, establishing a regional groundwater model that predicts responses to stresses, and identifying alternative water supply sources—including residential conservation and agricultural best management practices.